

**SEQUENCE LISTING**

<110> Herrman, Rafael  
Wong, James F.  
Lee, Jian-Ming

<120> SCORPION TOXINS

<130> BB1367 US NA

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<150> 60/140, 227  
<151> 1999-06-22

<160> 28

<170> Microsoft Office 97

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<211> 177  
<212> DNA  
<213> Hottentotta judaica

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gctatggat tcaactcagg aaaatgtata aacagtaaat gtaaatgcta taaataa 177

<210> 2  
<211> 58  
<212> PRT  
<213> Hottentotta judaica

<400> 2  
Met Ser Arg Ile Phe Thr Ile Ile Leu Ile Val Phe Ala Leu Asn Ile  
1 5 10 15  
Ile Ile Ser Leu Ser Asn Phe Lys Val Glu Ala Ala Gln Cys Tyr Ser  
20 25 30  
Ser Asp Cys Arg Val Lys Cys Ala Ala Met Gly Phe Asn Ser Gly Lys  
35 40 45  
Cys Ile Asn Ser Lys Cys Lys Cys Tyr Lys  
50 55

<210> 3  
<211> 186  
<212> DNA  
<213> Hottentotta judaica

<400> 3  
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cacgctcaat acgagttgga tgtaacgtgt atgggagag cagataattt cgtaaaacca 120  
tgctatgata aatacggcac aactaaaact aaatgcatca acgatcggtg caactgttat 180  
ccgtaa 186

<210> 4  
<211> 61  
<212> PRT  
<213> Hottentotta judaica

<400> 4  
 Met Lys Phe Phe Thr Ser Val Leu Met Met Met Ile Ile Phe Ser Met  
   1                   5                   10                   15  
 Val Ile Ser Ser His Ala Gln Tyr Glu Leu Asp Val Thr Cys Met Gly  
   20                   25                   30  
 Gly Ala Asp Asn Cys Val Lys Pro Cys Tyr Asp Lys Tyr Gly Thr Thr  
   35                   40                   45  
 Lys Thr Lys Cys Ile Asn Asp Arg Cys Asn Cys Tyr Pro  
   50                   55                   60  
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 <211> 180  
 <212> DNA  
 <213> Hottentotta judaica  
  
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 aattgccaag tagaaacaaa tggaaatgt acagggtggct catgtgcttc aacatgtaaa 120  
 agagtaatag gagtagctgc aggaaaatgc attaatggaa gatgtgtctg ctatccgtag 180  
 <210> 6  
 <211> 59  
 <212> PRT  
 <213> Hottentotta judaica  
  
 <400> 6  
 Met Lys Phe Ser Ser Ile Ile Leu Leu Thr Leu Leu Ile Cys Ser Met  
   1                   5                   10                   15  
 Thr Ile Cys Ile Asn Cys Gln Val Glu Thr Asn Val Lys Cys Thr Gly  
   20                   25                   30  
 Gly Ser Cys Ala Ser Thr Cys Lys Arg Val Ile Gly Val Ala Ala Gly  
   35                   40                   45  
 Lys Cys Ile Asn Gly Arg Cys Val Cys Tyr Pro  
   50                   55  
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 <211> 171  
 <212> DNA  
 <213> Hottentotta judaica  
  
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 atatcggttc ctggagtgta agctgttgc tggaaatgt gccccttca ttgcgcaggg 120  
 aaaaacgcca tacctacctg cgtatgtggc gagtgtaact gcaacgtatg a 171  
 <210> 8  
 <211> 56  
 <212> PRT  
 <213> Hottentotta judaica  
  
 <400> 8  
 Met Ser Arg Leu Phe Thr Leu Val Leu Ile Val Leu Ala Met Asn Val  
   1                   5                   10                   15  
 Met Met Ala Ile Ile Ser Asp Pro Gly Val Glu Ala Val Asp Cys Glu  
   20                   25                   30  
 Glu Cys Pro Phe His Cys Ala Gly Lys Asn Ala Ile Pro Thr Cys Asp  
   35                   40                   45

Asp Gly Glu Cys Asn Cys Asn Val  
 50 55

<210> 9  
 <211> 180  
 <212> DNA  
 <213> Hottentotta judaica

<400> 9  
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 acaattatgc ctgattcgaa agtagaaagct gttggttgtg aagattgccg tgagcactgt 120  
 tcccagcaaa atgcccggac aaaatgtgaa aatgacaaat gtgtatgcga acctaaatga 180

<210> 10  
 <211> 59  
 <212> PRT  
 <213> Hottentotta judaica

<400> 10  
 Met Lys Met Ser Arg Leu Tyr Ala Ile Ile Leu Ile Val Leu Val Met  
 1 5 10 15

Asn Val Ile Met Thr Ile Met Pro Asp Ser Lys Val Glu Ala Val Gly  
 20 25 30

Cys Glu Asp Cys Pro Glu His Cys Ser Gln Gln Asn Ala Arg Ala Lys  
 35 40 45

Cys Glu Asn Asp Lys Cys Val Cys Glu Pro Lys  
 50 55

<210> 11  
 <211> 213  
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 <213> Hottentotta judaica

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 aatcttagaa ggtgtcagtt aatttgtaga gaaagtggat tattagaaa gtgcattgga 180  
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<210> 12  
 <211> 70  
 <212> PRT  
 <213> Hottentotta judaica

<400> 12  
 Met Ile Lys Glu Leu Leu Ser Thr Glu Met Tyr Asn Tyr Tyr Lys Phe  
 1 5 10 15

Val Leu Ile Met Val Val Phe Phe Ala Ala Thr Ile Ile Phe Ser Asp  
 20 25 30

Ile Asn Val Glu Gly Ala Phe Cys Asn Leu Arg Arg Cys Gln Leu Ile  
 35 40 45

Cys Arg Glu Ser Gly Leu Leu Gly Lys Cys Ile Gly Asp Arg Cys Glu  
 50 55 60

Cys Val Pro His Gly Lys  
 65 70

<210> 13  
 <211> 186

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<212> DNA

<213> Hottentotta judaica

<400> 13

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aagaatgtt gcggaaatag gtggggaaaa tgtgctggtt atcagtcgt ctgtccatg 180  
aagtaa 186

<210> 14

<211> 61

<212> PRT

<213> Hottentotta judaica

<400> 14

Met Lys Phe Leu Tyr Gly Ile Ile Leu Ile Ala Leu Phe Leu Thr Val  
1 5 10 15

Met Ile Ala Thr His Ser Glu Ala Arg Cys Pro Asn Cys Phe Thr Thr  
20 25 30

Asn Pro Asn Ala Glu Ala Asp Cys Lys Lys Cys Cys Gly Asn Arg Trp  
35 40 45

Gly Lys Cys Ala Gly Tyr Gln Cys Val Cys Pro Met Lys  
50 55 60

<210> 15

<211> 176

<212> DNA

<213> Hottentotta judaica

<400> 15

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gaagctggac ttatagacgt aagatgtat gcctctcgat aatgttgggaa agcttgcaga 120  
aaagtaacag gatcaggaca aggaaagtgc cagaataacc aatgtcgat ttatta 176

<210> 16

<211> 58

<212> PRT

<213> Hottentotta judaica

<400> 16

Met Lys Ile Leu Ser Val Leu Leu Ile Ala Leu Ile Ile Cys Ser Leu  
1 5 10 15

Gly Val Cys Ile Glu Ala Gly Leu Ile Asp Val Arg Cys Ser Ala Ser  
20 25 30

Arg Glu Cys Trp Glu Ala Cys Arg Lys Val Thr Gly Ser Gly Gln Gly  
35 40 45

Lys Cys Gln Asn Asn Gln Cys Arg Cys Tyr  
50 55

<210> 17

<211> 177

<212> DNA

<213> Hottentotta judaica

<400> 17

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gaagctgatc ttatagacgt aaaatgtatt tcatctcaag aatgttggat tgcttgaaa 120  
aaagtaactg gacggttca aggaaaatgc cagaataaac aatgtcgat ttat 177

4004350-011102

<210> 18

<211> 58

<212> PRT

<213> Hottentotta judaica

<400> 18

Met Lys Ile Leu Ser Val Leu Leu Ile Ala Leu Ile Ile Cys Ser Ile  
1 5 10 15

Ser Ile Tyr Ser Glu Ala Asp Leu Ile Asp Val Lys Cys Ile Ser Ser  
20 25 30

Gln Glu Cys Trp Ile Ala Cys Lys Lys Val Thr Gly Arg Phe Gln Gly  
35 40 45

Lys Cys Gln Asn Lys Gln Cys Arg Cys Tyr  
50 55

<210> 19

<211> 174

<212> DNA

<213> Hottentotta judaica

<220>

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<222> (88)

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cagtttatag acgtgaaatg cacatcanc t aaggaatgtt ggcctatttg taagggaaaga 120  
tttggtgtgg ccagaggaaa gtgcataaat aagcaatgcc gttgttatttc gtaa 174

<210> 20

<211> 57

<212> PRT

<213> Hottentotta judaica

<220>

<221> UNSURE

<222> (30)

<400> 20

Ile Leu Ser Val Phe Leu Ile Thr Phe Val Ile Cys Ser Ile Met Ile  
1 5 10 15

Ser Thr Glu Ala Gln Phe Ile Asp Val Lys Cys Thr Ser Xaa Lys Glu  
20 25 30

Cys Trp Pro Ile Cys Lys Glu Arg Phe Gly Val Ala Arg Gly Lys Cys  
35 40 45

Ile Asn Lys Gln Cys Arg Cys Tyr Ser  
50 55

<210> 21

<211> 62

<212> PRT

<213> Centruroides noxius

<400> 21

Met Glu Gly Ile Ala Lys Ile Thr Leu Ile Leu Leu Phe Leu Phe Val  
1 5 10 15

Thr Met His Thr Phe Ala Asn Trp Asn Thr Glu Ala Ala Val Cys Val  
 20 25 30

Tyr Arg Thr Cys Asp Lys Asp Cys Lys Arg Arg Gly Tyr Arg Ser Gly  
 35 40 45

Lys Cys Ile Asn Asn Ala Cys Lys Cys Tyr Pro Tyr Gly Lys  
 50 55 60

<210> 22  
 <211> 59  
 <212> PRT  
 <213> *Androctonus australis*

<400> 22

Met Lys Val Phe Ser Ala Val Leu Ile Ile Leu Phe Val Cys Ser Met  
 1 5 10 15

Ile Ile Gly Ile Asn Ala Val Arg Ile Pro Val Ser Cys Lys His Ser  
 20 25 30

Gly Gln Cys Leu Lys Pro Cys Lys Asp Ala Gly Met Arg Phe Gly Lys  
 35 40 45

Cys Met Asn Gly Lys Cys Asp Cys Thr Pro Lys  
 50 55

<210> 23  
 <211> 28  
 <212> PRT  
 <213> *Leiurus quinquestriatus*

<400> 23

Val Gly Cys Glu Glu Cys Pro Met His Cys Lys Gly Lys Asn Ala Lys  
 1 5 10 15

Pro Thr Cys Asp Asn Gly Val Cys Asn Cys Asn Val  
 20 25

<210> 24  
 <211> 29  
 <212> PRT  
 <213> *Leiurus quinquestriatus*

<400> 24

Val Ser Cys Glu Asp Cys Pro Asp His Cys Ser Thr Gln Lys Ala Arg  
 1 5 10 15

Ala Lys Cys Asp Asn Asp Lys Cys Val Cys Glu Pro Lys  
 20 25

<210> 25  
 <211> 31  
 <212> PRT  
 <213> *Leiurus quinquestriatus*

<400> 25

Ala Phe Cys Asn Leu Arg Met Cys Gln Leu Ser Cys Arg Ser Leu Gly  
 1 5 10 15

Leu Leu Gly Lys Cys Ile Gly Asp Lys Cys Glu Cys Val Lys His  
 20 25 30

<210> 26  
 <211> 35

<212> PRT

<213> *Androctonus mauretanicus*

<400> 26

Cys Gly Pro Cys Phe Thr Thr Asp Pro Tyr Thr Glu Ser Lys Cys Ala  
1 5 10 15

Thr Cys Cys Gly Gly Arg Gly Lys Cys Val Gly Pro Gln Cys Leu Cys  
20 25 30

Asn Arg Ile  
35

<210> 27

<211> 36

<212> PRT

<213> *Leiurus quinquestriatus*

<400> 27

Gly Leu Ile Asp Val Arg Cys Tyr Asp Ser Arg Gln Cys Trp Ile Ala  
1 5 10 15

Cys Lys Lys Val Thr Gly Ser Thr Gln Gly Lys Cys Gln Asn Lys Gln  
20 25 30

Cys Arg Cys Tyr  
35

<210> 28

<211> 37

<212> PRT

<213> *Buthus martensi*

<400> 28

Xaa Phe Thr Asp Val Lys Cys Thr Gly Ser Lys Gln Cys Trp Pro Val  
1 5 10 15

Cys Lys Gln Met Phe Gly Lys Pro Asn Gly Lys Cys Met Asn Gly Lys  
20 25 30

Cys Arg Cys Tyr Ser  
35